

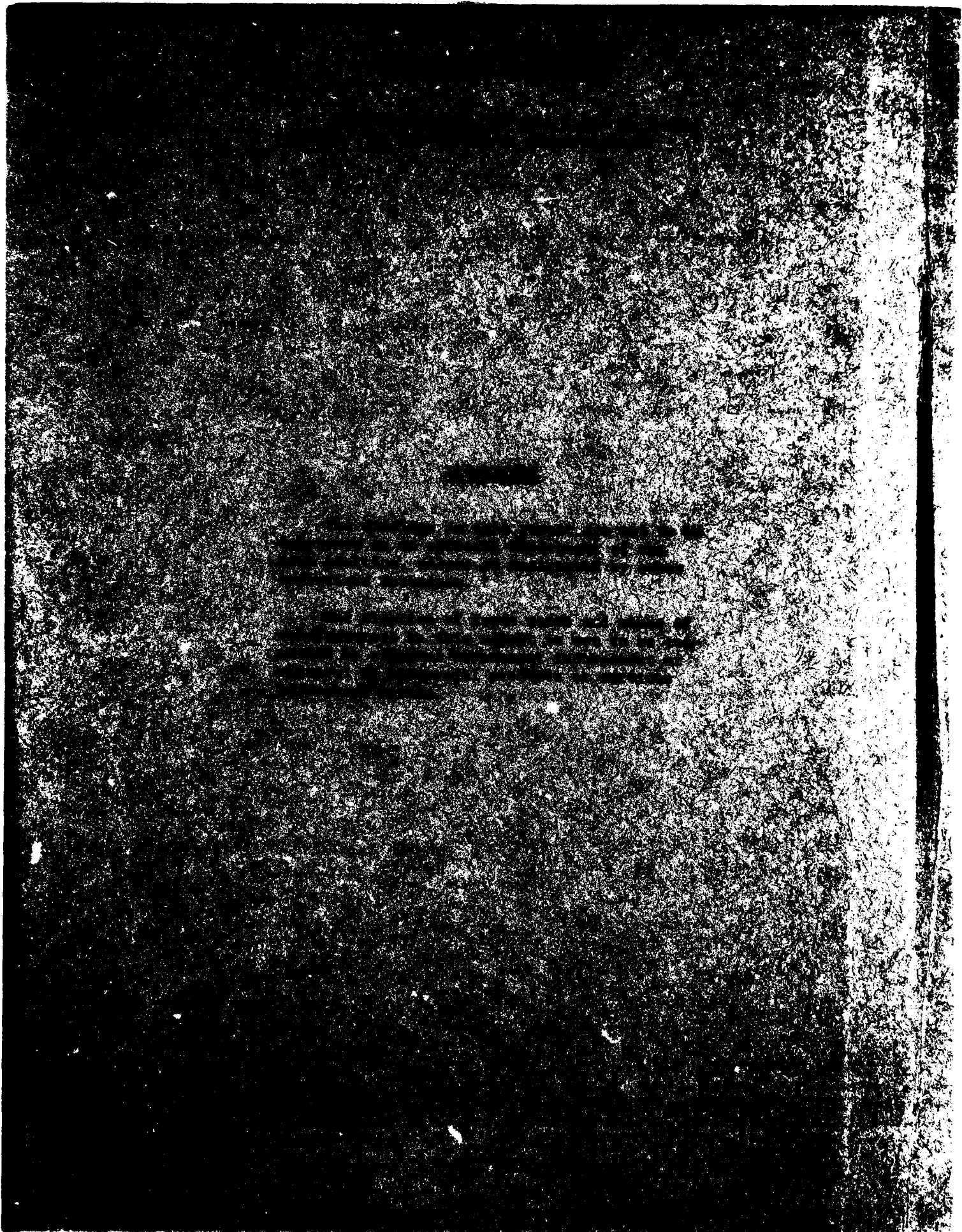
AD-A102 289 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
203018 ASSAULT BREAKER. MISSILE NUMBER FTV-2; ROUND NUMBER V2A1--ETC(U)
JUN 81 D C KELLER
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 20301B Assault Breaker, Missile Number FTV-2, Round Number V2A1 presented in tabular form.		

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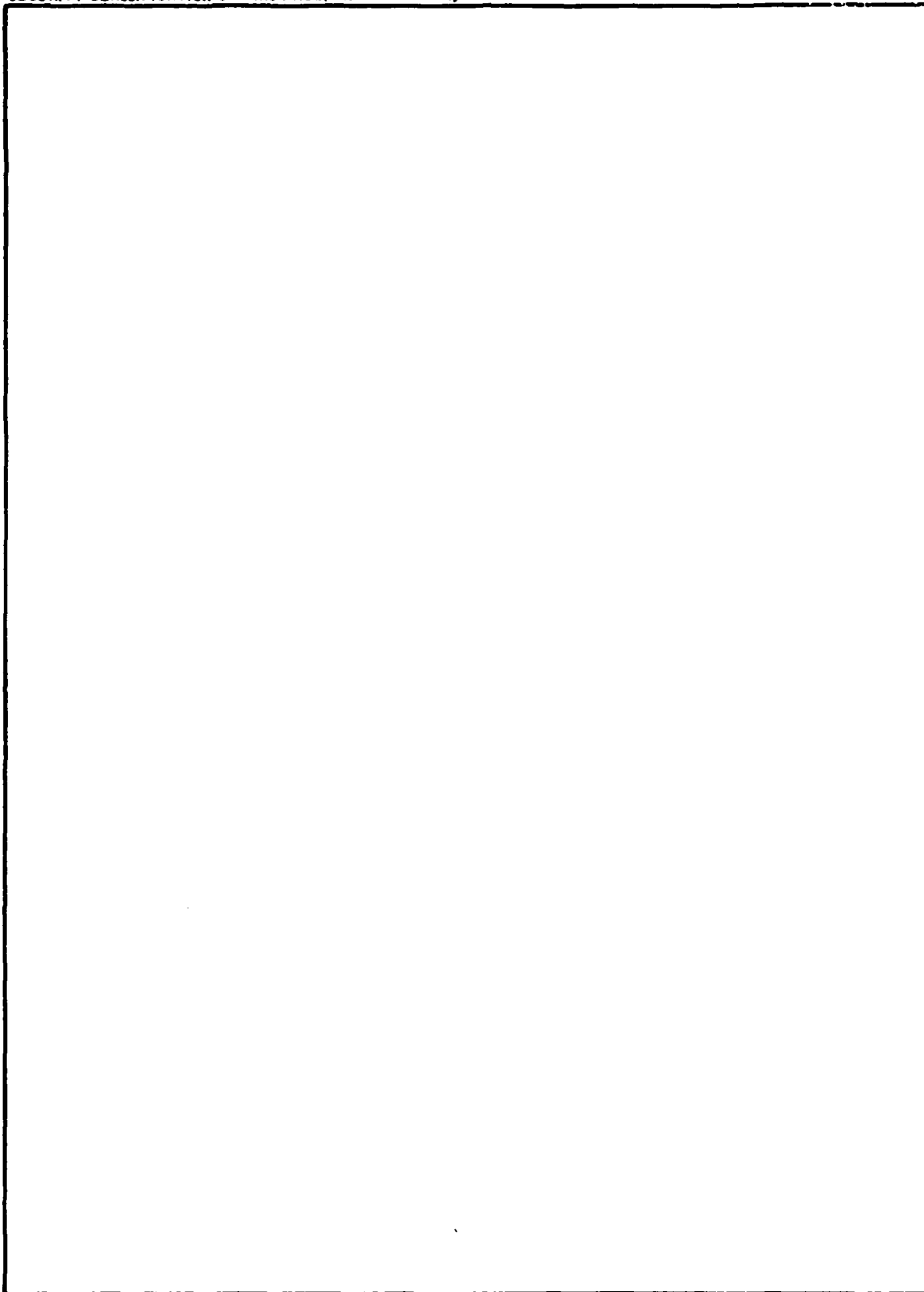
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INTRODUCTION

20301B Assault Breaker, Missile Number FTV-2, Round Number V2A1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0919 MDT, 24 June 1981. The scheduled launch time was 0900 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 and Jallen Met Site.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from PAPTS T-9 pilot observation at:

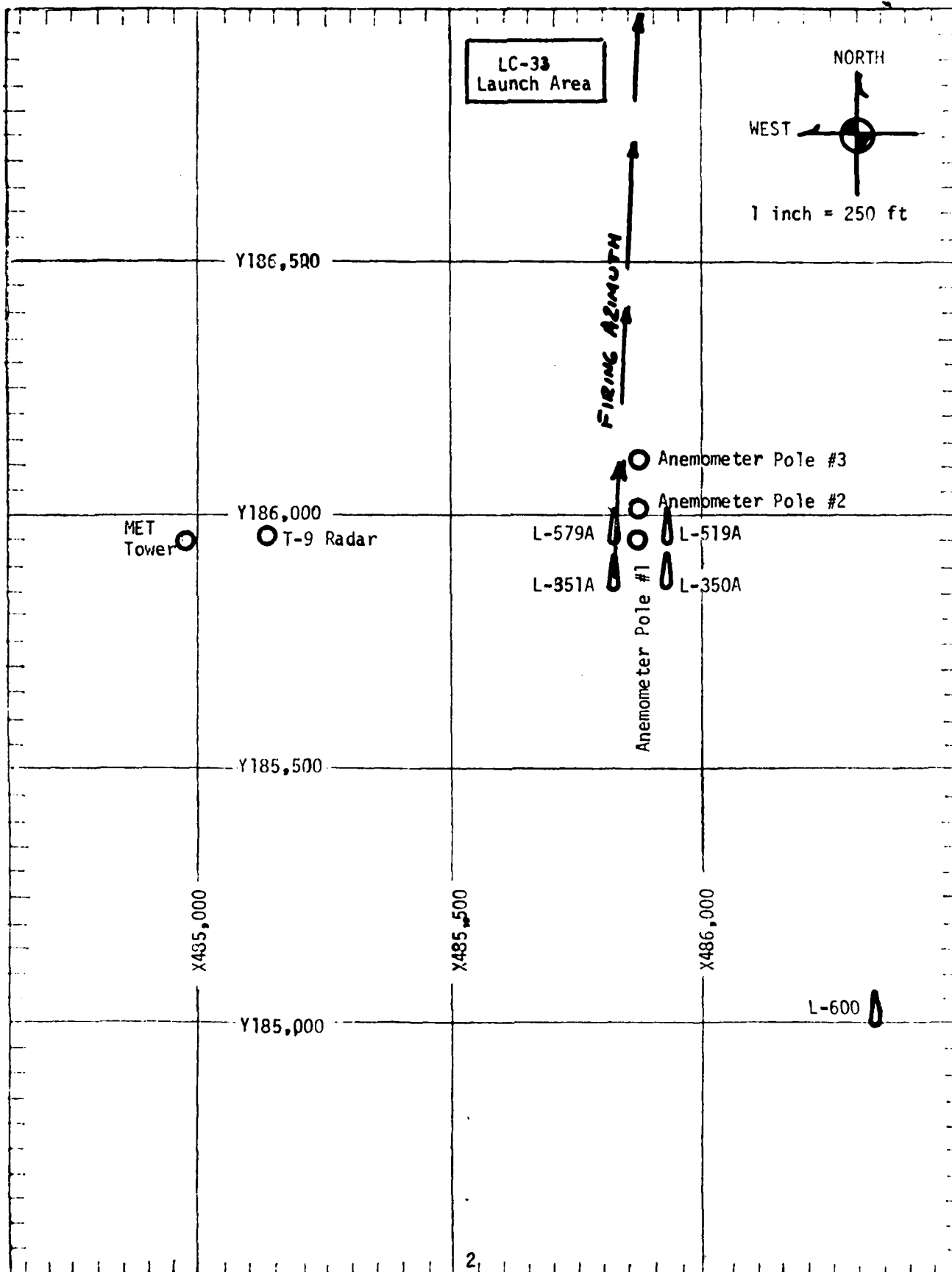
SITE AND ALTITUDE

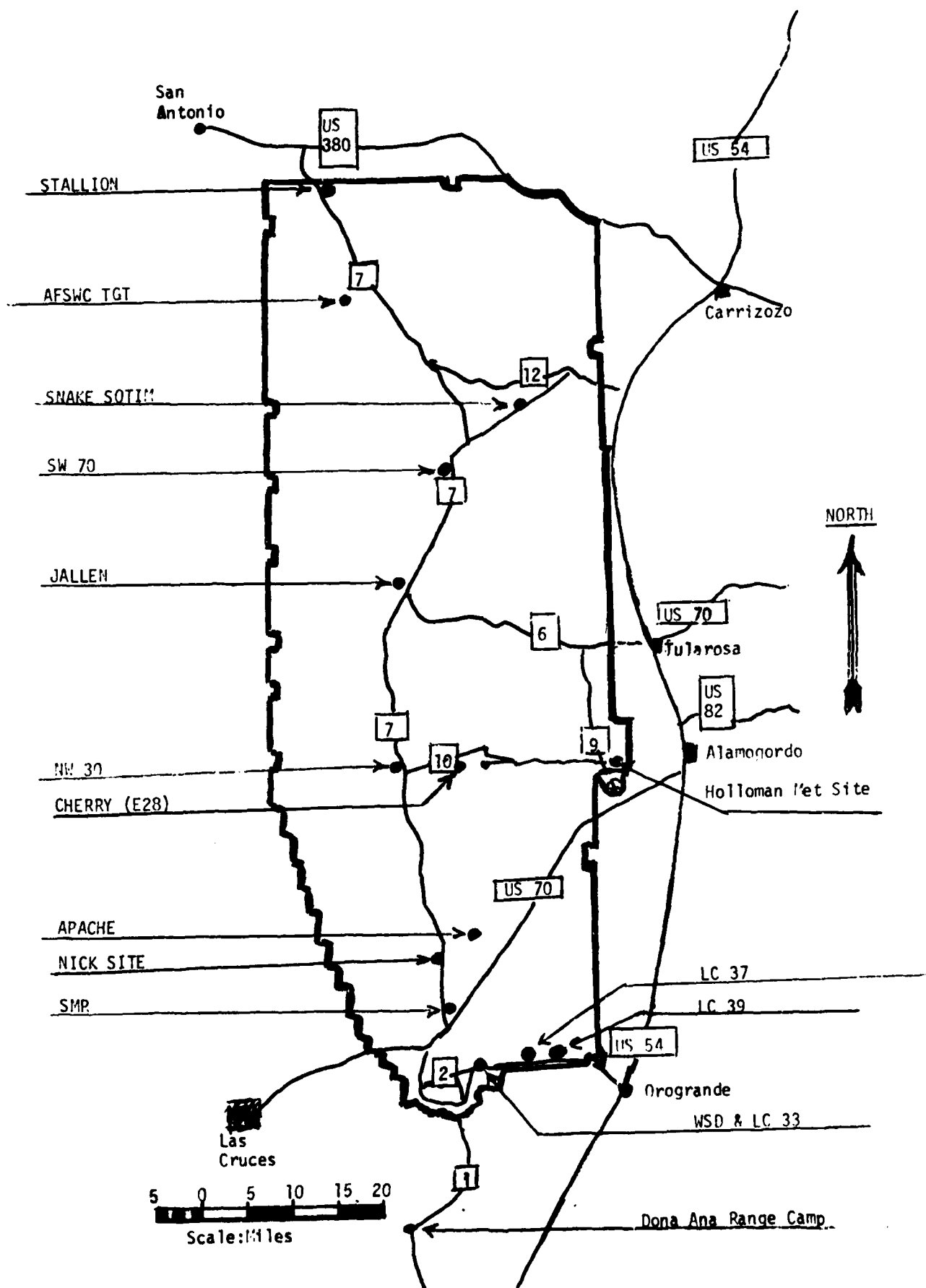
LC-33	2730 Meters
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(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible in 500-foot increments.

SITE AND TIME

NW30	0630 MDT
JAL	0745 MDT
WSD	0915 MDT
JAL	0915 MDT





PROJECT SURFACE OBSERVATION

TABLE 1		STATION LC-33							
DATE 24 DAY 6 MONTH 81 YEAR		X=484,982.64 Y=185,957.73 H=3983.00							
TIME M D T	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m ³	DIRECTION degs	SPEED kts	CHARACTER kts	VISIBIL- ITY
0919	880.1	28.1	13.1	40	1008	130	05		30

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS	
	1st LAYER		2nd LAYER		3rd LAYER			
	AMT	TYPE	AMT	TYPE	AMT	TYPE		
1	CU	7500	3	AC	13000	6	CS	E23000

PSYCHROMETRIC COMPUTATION

TIME:	0919
DRY BULB TEMP.	28.1
WET BULB TEMP.	18.1
WET BULB DEPR.	10.0
DEW POINT	13.1
RELATIVE HUMID.	40

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.21 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	121	05	-30	138	MISG	-30	162	06
-20	121	06	-20	142	MISG	-20	153	07
-10	121	06	-10	135	MISG	-10	154	07
0.0	121	06	0.0	149	MISG	0.0	151	07
+10	123	06	+10	147	MISG	+10	152	08

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	132	06	-30	126	06
-20	121	06	-20	147	06
-10	121	06	-10	136	05
0.0	138	05	0.0	153	05
+10	143	08	+10	154	05

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	150	07	-30	133	07
-20	153	06	-20	132	07
-10	127	06	-10	133	06
0.0	142	06	0.0	126	06
+10	142	05	+10	123	06

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 E & A DATE 24 Jun 81 TIME 0919 MDT

COORDINATES (WSTM) X= 485,135.76 Y= 185,919.24 H= 3988.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO _____.

HEIGHTS ARE METERS AGL XX OR FEET AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
sfc	130	05
30	125	06
90	115	05
150	137	05
210	140	05
270	156	04
330	114	04
390	108	03
450	090	01
510	172	02
570	326	02
630	338	02
690	280	04
750	282	07
810	288	06
870	303	07
930	293	10
990	300	12
1050	297	12
1110	286	10
1170	290	11
1230	295	17
1290	301	20
1350	295	18
1410	306	14
1470	319	13
1530	336	13
1590	322	12
1650	325	08
1710	329	09
1770	341	13

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PROJECT SURFACE OBSERVATION

TABLE 5									
STATION JAL-R									
DATE 24		Jun	81						
DAY	MONTH	YEAR		X= 450.362.08	Y= 464.129.26	H= 4053.51			
TIME M --	PRESSURE mbs	TEMPERATURE OF °C	DEW POINT OF °C	RELATIVE HUMIDITY %	DENSITY gm/m ³	DIRECTION degs	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
0845	877.3	26.4	11.5	40	1012		CALM		50
0915	877.3	27.9	121	3.8	1007		CALM		50
0945	877.2	28.2	13.6	41	1005	170	02		50

OBSTRUCTIONS TO VISIBILITY	CLOUDS							REMARKS	
	1st LAYER		2nd LAYER		3rd LAYER				
	AMT	TYPE	HGT	AMT	TYPE	HGT	AMT		TYPE
None	4	AS	12000	6	CI	20000			
None	3	AS	12000	7	CI	20000			
None	8	CI	20000						

PSYCHROMETRIC COMPUTATION

TIME:	0845	0915	0945
DRY BULB TEMP.	26.4	27.9	28.2
WET BULB TEMP.	16.7	17.5	18.4
WET BULB DEPR.	9.7	10.4	9.8
DEW POINT	11.5	21.1	13.6
RELATIVE HUMID.	40	38	41

STATION ALTITUDE 4010.40 FEET MSL
24 JUNE 81
ASCENSION NO. 59

SIGNIFICANT LEVEL DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
879.5	4010.4	22.6	13.4	56.0
865.0	4487.9	24.6	12.2	46.0
850.0	4992.1	24.6	12.2	46.0
760.4	8163.6	17.7	6.6	48.0
741.0	8860.9	18.4	5.9	44.0
700.0	10483.8	14.3	2.9	46.0
652.0	12441.5	9.9	-0	50.0
616.0	13982.9	5.7	-1.9	58.0
591.0	15093.3	3.0	-3.3	63.0
549.2	17031.3	-2.2	-4.5	84.0
525.0	18203.7	-5.3	-7.9	82.0
500.0	19461.6	-6.8	-11.3	70.0
490.0	19979.5	-8.3	-12.1	74.0
482.9	20352.4	-8.5	-14.1	64.0
469.8	21053.3	-9.5	-15.8	60.0
444.2	22467.8	-13.5	-16.8	76.0
432.2	23151.8	-15.0	-18.9	72.0
416.2	24088.3	-16.6	-21.3	67.0
409.0	24520.1	-16.6	-23.7	54.0
400.0	25070.5	-16.8	-26.4	43.0
353.6	28082.3	-22.9	-34.4	34.0
327.6	29907.9	-27.7	-36.6	42.0
300.0	31967.7	-33.3	-40.9	46.0
290.2	32733.9	-34.7	-41.2	51.0
266.8	34648.3	-39.5	-48.3	38.0
255.6	35609.8	-42.0	-50.2	40.0
250.0	36102.5	-43.3		
233.8	37577.5	-46.6		
203.2	40597.7	-53.5		
200.0	40933.8	-54.0		
171.0	44191.2	-61.5		
158.2	45774.5	-63.3		
150.0	46849.5	-64.7		
138.4	48466.1	-65.7		
131.0	49560.9	-68.1		
109.8	53042.9	-69.9		
100.0	54882.5	-69.2		
94.4	56012.4	-71.4		
80.0	59263.0	-68.6		
77.4	59925.0	-63.3		

STATION ALTITUDE 4610.40 FEET MSL
24 JUNE 81 0630 HRS MDI
ASCENSION NO. 59

SIGNIFICANT LEVEL DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 6 (Con't)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
70.0	61982.3	-59.6		
57.4	66081.9	-59.6		
50.0	68954.7	-56.5		
45.4	70979.5	-56.3		
34.2	76959.1	-54.0		
30.0	79755.9	-51.6		
23.0	85554.5	-44.3		
20.6	88004.8	-43.3		
20.0	88665.2	-42.1		
15.8	93969.2	-40.2		
13.4	97695.6	-39.9		
10.0	104429.2	-32.4		
9.6	105384.6	-31.9		

STATION ALTITUDE 4010.40 FEET MSL
24 JUNE 61 0630 HRS MDT
ASCENSION NO. 59

UPPER AIR DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
4010.4	879.5	22.6	13.4	56.0	1029.1	672.2	350.0	1.000296
4500.0	864.6	24.6	12.2	46.0	1005.3	674.3	327.8	1.000285
5000.0	849.8	24.6	12.2	46.0	988.0	674.4	292.7	1.000281
5500.0	835.0	23.5	11.3	46.3	974.6	673.0	262.7	1.000275
6000.0	820.4	22.4	10.4	46.6	961.4	671.7	243.2	1.000269
6500.0	806.2	21.3	9.5	47.0	948.4	670.4	228.8	1.000263
7000.0	792.1	20.2	8.6	47.3	935.5	669.1	223.0	1.000258
7500.0	778.3	19.1	7.8	47.6	922.9	667.8	228.1	1.000253
8000.0	764.8	18.1	6.9	47.9	910.4	666.4	244.4	1.000247
8500.0	751.4	18.0	6.3	46.1	894.6	666.4	260.1	1.000242
9000.0	738.1	18.0	5.7	44.2	878.9	666.4	254.8	1.000237
9500.0	725.0	16.8	4.7	44.8	867.3	664.8	248.2	1.000232
10000.0	712.2	15.5	3.8	45.4	855.8	663.3	239.6	1.000227
10500.0	699.6	14.3	2.8	46.0	844.5	661.8	256.1	1.000223
11000.0	687.0	13.1	2.1	47.1	832.7	660.5	279.3	1.000218
11500.0	674.7	12.0	1.4	48.1	821.1	659.1	306.4	1.000214
12000.0	662.5	10.9	.6	49.1	809.6	657.8	323.5	1.000210
12500.0	650.6	9.7	-.1	50.3	798.3	656.4	333.3	1.000207
13000.0	638.7	8.4	-.7	52.9	787.6	654.8	335.9	1.000203
13500.0	627.1	7.0	-1.3	55.5	777.1	653.2	340.5	1.000200
14000.0	615.6	5.7	-1.9	58.1	766.7	651.6	349.0	1.000197
14500.0	604.2	4.4	-2.6	60.3	755.9	650.1	357.8	1.000193
15000.0	593.1	3.2	-3.2	62.6	745.2	648.7	6.5	1.000190
15500.0	582.0	1.9	-3.5	67.4	734.8	647.1	16.2	1.000187
16000.0	571.1	.6	-3.7	72.8	724.6	645.5	25.7	1.000185
16500.0	560.4	-.8	-4.1	78.2	714.5	643.9	34.7	1.000182
17000.0	549.9	-2.1	-4.5	83.7	704.6	642.3	41.7	1.000180
17500.0	539.4	-3.4	-5.9	83.2	694.8	640.7	48.4	1.000175
18000.0	529.1	-4.8	-7.3	82.3	685.1	639.0	53.3	1.000171
18500.0	519.0	-5.7	-8.7	79.2	674.3	637.9	57.7	1.000167
19000.0	509.0	-6.2	-10.0	74.4	663.0	637.1	60.5	1.000163
19500.0	499.3	-6.9	-11.4	70.3	652.0	636.3	62.2	1.000159
20000.0	489.6	-8.3	-12.2	73.5	642.8	634.6	59.5	1.000156
20500.0	480.1	-8.7	-14.4	63.2	631.5	634.0	58.1	1.000152
21000.0	470.8	-9.4	-15.7	60.3	621.0	633.1	52.5	1.000148
21500.0	461.6	-10.8	-16.4	65.1	611.9	631.5	50.3	1.000146
22000.0	452.5	-12.2	-16.4	70.7	603.2	629.8	49.1	1.000144
22500.0	443.6	-13.6	-16.9	75.8	594.5	628.1	49.1	1.000142
23000.0	434.8	-14.7	-19.4	72.9	585.3	626.7	49.8	1.000138
23500.0	426.2	-15.6	-19.8	70.1	575.6	625.6	49.0	1.000136

STATION ALTITUDE 4010.40 FEET MSL
 24 JUNE 61
 ASCENSION NO. 59

UPPER AIR DATA
 1750220059
 NW 30

GEODETTIC COORDINATES
 32.88497 LAT DEG
 106.49714 LON DEG

TABLE 7 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.7	-16.4	67.5	566.2	624.5	47.4	11.4	1.000133
24500.0	409.3	-16.6	54.6	555.4	624.3	46.8	11.2	1.000129
25000.0	401.1	-16.8	44.4	544.7	624.0	47.2	11.0	1.000126
25500.0	393.0	-17.7	41.7	535.6	622.9	55.6	10.8	1.000123
26000.0	385.1	-18.7	40.2	526.9	621.6	65.8	10.4	1.000121
26500.0	377.3	-19.7	38.7	518.3	620.4	82.4	9.6	1.000118
27000.0	369.6	-20.7	37.2	509.8	619.1	93.0	9.3	1.000116
27500.0	362.1	-21.7	35.7	501.5	617.9	93.3	8.9	1.000114
28000.0	354.8	-22.7	34.2	493.4	616.6	85.6	8.5	1.000112
28500.0	347.5	-24.0	35.8	485.7	615.0	71.5	8.6	1.000110
29000.0	340.3	-25.3	38.0	478.2	613.4	64.6	8.1	1.000108
29500.0	333.2	-26.6	40.2	470.8	611.8	59.3	7.2	1.000107
30000.0	326.3	-28.0	42.2	463.5	610.1	46.5	5.7	1.000105
30500.0	319.4	-29.3	43.1	456.2	608.4	25.1	4.6	1.000103
31000.0	312.7	-30.7	44.1	449.1	606.7	1.0	5.0	1.000101
31500.0	306.1	-32.0	45.1	442.1	605.0	344.0	6.1	1.000100
32000.0	299.6	-33.4	46.2	435.1	603.3	336.7	7.3	1.000098
32500.0	293.2	-34.3	49.5	427.4	602.2	333.7	8.7	1.000096
33000.0	286.8	-35.4	49.2	420.1	600.8	335.6	10.2	1.000095
33500.0	280.6	-36.6	45.8	413.2	599.2	337.5	11.7	1.000093
34000.0	274.5	-37.9	42.4	406.4	597.6	339.2	13.1	1.000091
34500.0	268.5	-39.1	39.0	399.7	596.0	336.2	14.2	1.000090
35000.0	262.6	-40.4	38.7	393.1	594.4	331.6	15.1	1.000088
35500.0	256.9	-41.7	39.8	386.6	592.7	326.4	16.5	1.000087
36000.0	251.2	-43.0	8.3**	380.2	591.0	321.4	18.3	1.000085
36500.0	245.5	-44.2		373.6	589.5	318.0	19.7	1.000083
37000.0	240.0	-45.3		367.0	588.0	315.5	20.7	1.000082
37500.0	234.6	-46.4		360.5	586.6	314.0	20.5	1.000080
38000.0	229.3	-47.6		354.0	585.1	312.9	19.6	1.000079
38500.0	224.0	-48.7		347.7	583.6	312.9	19.7	1.000077
39000.0	218.9	-49.8		341.4	582.2	313.5	19.9	1.000076
39500.0	213.8	-51.0		335.3	580.7	318.4	20.2	1.000075
40000.0	208.9	-52.1		329.3	579.2	323.2	20.7	1.000073
40500.0	204.1	-53.3		323.4	577.7	329.8	20.9	1.000072
41000.0	199.4	-54.2		317.1	576.5	336.3	21.5	1.000071
41500.0	194.6	-55.3		311.2	575.0	344.5	20.1	1.000069
42000.0	190.0	-56.5		305.5	573.5	353.8	19.1	1.000068
42500.0	185.5	-57.6		299.8	572.0	2.0	18.0	1.000067
43000.0	181.1	-58.8		294.2	570.4	10.9	17.2	1.000066
43500.0	176.0	-59.9		288.4	568.9	12.8	17.6	1.000064

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.40 FEET MSL
24 JUNE 81
ASCENSION NO. 59

UPPER AIR DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
44000.0	172.6	-61.1		283.5	567.4	12.5	18.2	1.000063
44500.0	169.4	-61.9		277.7	566.3	15.9	18.9	1.000062
45000.0	164.3	-62.4		271.7	565.5	21.2	20.0	1.000060
45500.0	160.3	-63.0		265.8	564.8	28.4	21.1	1.000059
46000.0	156.4	-63.6		260.1	564.0	38.2	22.5	1.000058
46500.0	152.6	-64.2		254.5	563.1	47.6	24.2	1.000057
47000.0	148.9	-64.8		248.9	562.3	58.0	25.7	1.000055
47500.0	145.2	-65.1		243.2	561.9	68.7	27.8	1.000054
48000.0	141.6	-65.4		237.5	561.5	80.3	28.1	1.000053
48500.0	138.2	-65.8		232.1	561.0	91.2	29.5	1.000052
49000.0	134.7	-66.9		227.5	559.5	99.0	27.0	1.000051
49500.0	131.4	-68.0		223.1	558.0	108.1	24.9	1.000050
50000.0	128.1	-68.3		217.9	557.6	109.5	22.2	1.000049
50500.0	124.9	-68.6		212.7	557.2	109.8	19.4	1.000047
51000.0	121.8	-68.8		207.7	556.8	106.2	17.4	1.000046
51500.0	118.7	-69.1		202.7	556.5	100.0	16.0	1.000045
52000.0	115.8	-69.4		197.9	556.1	94.7	15.2	1.000044
52500.0	112.9	-69.6		193.2	555.8	90.9	14.8	1.000043
53000.0	110.0	-69.9		188.6	555.4	86.6	14.6	1.000042
53500.0	107.3	-69.7		183.7	555.6	81.8	15.0	1.000041
54000.0	104.6	-69.5		178.9	555.9	76.5	15.6	1.000040
54500.0	102.0	-69.3		174.3	556.2	69.9	17.0	1.000039
55000.0	99.4	-69.4		170.0	556.1	67.2	18.0	1.000038
55500.0	96.9	-70.4		166.5	554.7	74.5	17.6	1.000037
56000.0	94.5	-71.4		163.1	553.4	82.1	17.4	1.000036
56500.0	92.1	-71.0		158.7	553.9	92.5	16.9	1.000035
57000.0	89.8	-70.5		154.4	554.5	103.2	16.9	1.000034
57500.0	87.5	-70.1		150.2	555.1	107.0	17.0	1.000033
58000.0	85.3	-69.7		146.1	555.7	104.5	16.6	1.000033
58500.0	83.2	-69.3		142.1	556.3	102.0	16.3	1.000032
59000.0	81.1	-68.8		138.2	556.9	99.0	16.2	1.000031
59500.0	79.1	-66.7		133.4	559.8	97.3	16.1	1.000030
60000.0	77.1	-63.2		127.9	564.5	94.9	15.1	1.000028
60500.0	75.3	-62.3		124.3	565.7	92.1	13.9	1.000028
61000.0	73.4	-61.4		120.8	566.9	88.8	12.6	1.000027
61500.0	71.7	-60.5		117.4	568.1	84.7	11.1	1.000026
62000.0	69.9	-59.6		114.1	569.3	79.5	9.8	1.000025
62500.0	68.3	-59.6		111.4	569.3	70.9	10.5	1.000025
63000.0	66.6	-59.6		108.7	569.3	74.7	11.2	1.000024
63500.0	65.0	-59.6		106.1	569.3	77.9	13.1	1.000024

STATION ALTITUDE 4010.40 FEET MSL
24 JUNE 81
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UPPER AIR DATA
1750220059
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GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	63.5	-59.6		103.6	569.3	81.5	15.6	1.000023
64500.0	62.0	-59.6		101.1	569.3	85.4	17.8	1.000023
65000.0	60.5	-59.6		98.7	569.3	89.7	19.8	1.000022
65500.0	59.0	-59.6		96.3	569.3	92.3	21.8	1.000021
66000.0	57.6	-59.6		94.0	569.3	91.3	23.6	1.000021
66500.0	56.3	-59.1		91.6	569.9	90.4	25.5	1.000020
67000.0	54.9	-58.6		89.2	570.6	89.7	26.4	1.000020
67500.0	53.6	-58.1		86.8	571.3	88.9	26.8	1.000019
68000.0	52.3	-57.5		84.6	572.1	88.1	27.2	1.000019
68500.0	51.1	-57.0		82.4	572.8	85.8	27.0	1.000018
69000.0	49.9	-56.5		80.2	573.4	82.9	26.7	1.000018
69500.0	48.7	-56.4		78.3	573.5	80.0	26.4	1.000017
70000.0	47.6	-56.4		76.5	573.6	79.3	26.2	1.000017
70500.0	46.4	-56.3		74.6	573.6	78.7	25.9	1.000017
71000.0	45.4	-56.3		72.9	573.7	78.3	25.7	1.000016
71500.0	44.3	-56.1		71.1	574.0	80.7	25.3	1.000016
72000.0	43.3	-55.9		69.4	574.2	83.2	25.0	1.000015
72500.0	42.2	-55.7		67.7	574.5	85.4	24.8	1.000015
73000.0	41.3	-55.5		66.0	574.7	87.0	24.8	1.000015
73500.0	40.3	-55.3		64.4	575.0	88.5	24.9	1.000014
74000.0	39.3	-55.1		62.9	575.2	89.6	24.8	1.000014
74500.0	38.4	-54.9		61.3	575.5	90.2	24.5	1.000014
75000.0	37.5	-54.8		59.9	575.7	90.9	24.1	1.000013
75500.0	36.6	-54.6		58.4	576.0	91.2	24.8	1.000013
76000.0	35.8	-54.4		57.0	576.2	91.3	25.8	1.000013
76500.0	35.0	-54.2		55.6	576.5	91.5	26.9	1.000012
77000.0	34.1	-54.0		54.3	576.8	90.9	29.8	1.000012
77500.0	33.3	-53.5		52.9	577.3	90.4	32.8	1.000012
78000.0	32.6	-53.1		51.6	577.9	90.0	35.3	1.000011
78500.0	31.8	-52.7		50.3	578.5	89.8	35.6	1.000011
79000.0	31.1	-52.2		49.0	579.0	89.6	35.9	1.000011
79500.0	30.4	-51.8		47.8	579.6	88.9	34.8	1.000011
80000.0	29.7	-51.3		46.6	580.3	87.5	32.3	1.000010
80500.0	29.0	-50.7		45.4	581.1	85.8	29.9	1.000010
81000.0	28.3	-50.0		44.2	581.9	85.3	29.8	1.000010
81500.0	27.7	-49.4		43.1	582.7	85.2	30.3	1.000010
82000.0	27.1	-48.8		42.0	583.6	85.1	30.9	1.000009
82500.0	26.5	-48.1		41.0	584.4	86.4	33.2	1.000009
83000.0	25.9	-47.5		39.9	585.2	87.5	35.6	1.000009
83500.0	25.3	-46.9		38.9	586.0	88.0	37.8	1.000009

STATION ALTITUDE 4010.00 FEET MSL
24 JUNE 81
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UPPER AIR DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
04000.0	24.7	-46.3			37.9	586.8	87.5	39.6	1.000008
04500.0	24.1	-45.6			37.0	587.6	87.0	41.4	1.000008
05000.0	23.6	-45.0			36.0	588.4	88.1	40.8	1.000008
05500.0	23.1	-44.4			35.1	589.3	90.7	38.1	1.000008
06000.0	22.5	-44.1			34.3	589.6	93.6	35.5	1.000008
06500.0	22.0	-43.9			33.5	589.8	95.7	33.7	1.000007
07000.0	21.6	-43.7			32.7	590.1	96.2	32.7	1.000007
07500.0	21.1	-43.5			32.0	590.4	96.8	31.7	1.000007
08000.0	20.6	-43.3			31.2	590.6	97.3	30.7	1.000007
08500.0	20.1	-42.4			30.4	591.8	93.5	32.5	1.000007
09000.0	19.7	-42.0			29.7	592.3	90.1	34.3	1.000007
09500.0	19.3	-41.8			29.0	592.6	87.0	36.2	1.000006
10000.0	18.8	-41.6			28.4	592.8	84.6	38.1	1.000006
10500.0	18.4	-41.4			27.7	593.0	82.7	39.8	1.000006
11000.0	18.0	-41.3			27.1	593.2	81.0	41.6	1.000006
11500.0	17.6	-41.1			26.5	593.5	79.4	43.4	1.000006
12000.0	17.2	-40.9			25.9	593.7	79.5	43.9	1.000006
12500.0	16.9	-40.7			25.3	593.9	79.7	44.4	1.000006
13000.0	16.5	-40.5			24.7	594.2	79.9	44.9	1.000005
13500.0	16.1	-40.4			24.1	594.4	81.3	45.0	1.000005
14000.0	15.8	-40.2			23.6	594.6	84.3	44.6	1.000005
14500.0	15.4	-40.2			23.1	594.7	87.4	44.3	1.000005
15000.0	15.1	-40.1			22.6	594.7	90.5	44.2	1.000005
15500.0	14.8	-40.1			22.1	594.8	92.0	44.9	1.000005
16000.0	14.4	-40.0			21.6	594.8	93.1	45.6	1.000005
16500.0	14.1	-40.0			21.1	594.9	94.3	46.4	1.000005
17000.0	13.8	-40.0			20.6	594.9	94.4	46.7	1.000005
17500.0	13.5	-39.9			20.2	595.0	92.3	46.0	1.000004
18000.0	13.2	-39.6			19.7	595.4	90.2	45.4	1.000004
18500.0	12.9	-39.0			19.3	596.1	88.0	44.8	1.000004
19000.0	12.7	-38.4			18.8	596.8	88.6	43.5	1.000004
19500.0	12.4	-37.9			18.3	597.5	90.3	42.0	1.000004
20000.0	12.1	-37.3			17.9	598.2	92.0	40.6	1.000004
20500.0	11.9	-36.8			17.5	599.0	93.9	39.7	1.000004
21000.0	11.6	-36.2			17.1	599.7	95.4	42.4	1.000004
21500.0	11.4	-35.7			16.7	600.4	96.7	45.1	1.000004
22000.0	11.1	-35.1			16.3	601.1	97.9	47.7	1.000004
22500.0	10.9	-34.5			15.9	601.8			1.000004
23000.0	10.6	-34.0			15.5	602.5			1.000003
23500.0	10.4	-33.4			15.1	603.2			1.000003

STATION ALTITUDE 4010.40 FEET MSL
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UPPER AIR DATA
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
104000.0	10.2	-32.9		14.8	603.9			1.000003
104500.0	10.0	-32.4		14.4	604.5			1.000003
105000.0	9.8	-32.1		14.1	604.8			1.000003

STATION ALTITUDE 4010.40 FEET ASL
24 JUNE 81
ASCENSION NO. 59 0630 HRS MDT

MANDATORY LEVELS
1750220059
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4989.	24.6	12.2	46.	293.4	2.7
800.0	6723.	20.8	9.2	47.	222.2	7.7
750.0	8544.	18.1	6.2	46.	259.6	13.8
700.0	10474.	14.3	2.9	46.	255.2	10.6
650.0	12512.	9.7	-1.1	50.	333.4	11.0
600.0	14673.	4.0	-2.8	61.	1.0	11.1
550.0	16972.	-2.1	-4.5	84.	41.5	15.4
500.0	19435.	-6.8	-11.3	70.	62.0	24.5
450.0	22109.	-12.6	-16.5	72.	48.8	17.7
400.0	25029.	-16.8	-26.4	43.	48.2	10.9
350.0	28278.	-23.5	-34.6	35.	76.6	8.5
300.0	31904.	-33.3	-40.9	46.	337.3	7.2
250.0	36024.	-43.3			320.6	18.7
200.0	40835.	-54.0			335.2	21.4
175.0	43606.	-60.4			12.7	17.8
150.0	46723.	-64.7			55.1	25.1
125.0	50344.	-68.6			109.8	19.6
100.0	54713.	-69.2			65.8	16.1
80.0	59068.	-68.6			98.5	16.2
70.0	61770.	-59.6			79.9	9.9
60.0	64934.	-59.6			90.7	20.3
50.0	68696.	-56.5			83.4	26.7
40.0	73351.	-55.3			88.8	25.0
30.0	79416.	-51.6			88.3	33.7
25.0	83341.	-46.6			87.8	36.4
20.0	88249.	-42.1			92.6	32.9
15.0	94668.	-40.1			91.0	44.3
10.0	103861.	-32.4				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

SIGNIFICANT LEVEL DATA
1750030057
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 81 0745 HRS MDT
ASCENSION NO. 57

TABLE 9

PRESSURE GEOMETRIC MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
877.2	22.5	10.6	47.0
859.6	23.6	9.6	41.0
850.0	23.4	9.0	40.0
814.6	23.1	7.2	36.0
766.4	18.9	3.9	37.0
747.2	19.2	2.6	33.0
700.0	14.8	-1.1	36.0
593.6	3.2	-4.3	58.0
533.2	-4.2	-6.8	82.0
500.0	-7.8	-11.1	77.0
465.8	-11.6	-15.1	75.0
452.6	-12.6	-17.8	65.0
404.9	-18.7	-23.8	64.0
400.0	-18.7	-25.9	53.0
377.8	-19.8	-31.9	33.0
354.7	-23.8	-41.3	18.0
321.0	-30.1	-41.7	31.0
300.0	-34.3	-38.8	63.0
278.6	-37.2	-43.6	51.0
250.0	-43.9	-49.7	52.0
200.0	-54.7		
167.6	-61.6		
150.0	-64.5		
142.2	-65.0		
139.4	-67.9		
112.2	-70.4		
107.6	-68.6		
100.0	-70.2		

STATION ALTITUDE 4951.00 FEET MSL
24 JUNE 61
ASCENSION NO. 57 0745 HRS MDT

UPPER AIR DATA
1750030057
JALLEN

GEODETTIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
4051.0	877.2	22.5	10.6	47.0	1027.9	671.7	0.0	0.0	1.000285
4500.0	863.6	23.4	9.8	42.4	1009.2	672.6	215.1	.8	1.000277
5000.0	840.6	23.4	9.0	39.8	991.8	672.6	215.1	1.8	1.000271
5500.0	833.9	23.3	8.2	38.2	975.3	672.4	215.1	2.7	1.000264
6000.0	819.5	23.1	7.5	36.6	950.9	672.2	216.9	3.7	1.000258
6500.0	805.3	22.3	6.6	36.2	945.1	671.2	222.4	4.7	1.000253
7000.0	791.2	21.1	5.6	36.5	932.7	669.7	228.2	5.7	1.000248
7500.0	777.4	19.9	4.7	36.8	920.4	668.3	234.2	6.9	1.000243
8000.0	763.9	18.9	3.7	36.5	907.4	667.1	241.3	8.0	1.000238
8500.0	750.4	19.1	2.8	33.7	891.0	667.3	247.7	9.1	1.000232
9000.0	737.2	18.3	2.0	33.6	878.0	666.3	258.6	9.2	1.000227
9500.0	724.2	17.1	1.3	34.4	866.1	664.9	270.2	9.0	1.000223
10000.0	711.3	15.9	.6	35.3	854.5	663.4	285.9	8.3	1.000219
10500.0	698.7	14.7	-1.1	36.2	842.9	662.0	302.0	7.6	1.000216
11000.0	686.0	13.4	-4.4	38.7	831.3	660.5	319.4	7.1	1.000213
11500.0	673.5	12.1	-7.7	41.1	819.9	659.0	331.2	7.4	1.000210
12000.0	661.3	10.8	-11.1	43.6	808.7	657.5	338.9	8.0	1.000207
12500.0	649.3	9.5	-15.5	46.0	797.7	656.0	341.3	8.7	1.000204
13000.0	637.5	8.2	-20.0	48.5	786.8	654.5	344.9	9.7	1.000201
13500.0	625.9	6.9	-25.5	50.9	776.1	653.0	350.2	11.4	1.000197
14000.0	614.5	5.6	-31.1	53.4	765.0	651.4	355.6	13.1	1.000194
14500.0	603.3	4.3	-37.7	55.8	755.2	649.9	1.1	14.9	1.000191
15000.0	592.3	3.0	-44.3	58.5	744.9	648.4	8.8	15.3	1.000188
15500.0	581.2	1.7	-46.6	62.7	734.4	646.8	19.2	15.0	1.000185
16000.0	570.2	.4	-50.0	67.0	724.1	645.3	30.2	14.5	1.000183
16500.0	559.5	-0.9	-54.4	71.2	713.9	643.7	41.5	14.4	1.000180
17000.0	549.0	-2.2	-59.9	75.5	703.9	642.1	51.0	14.9	1.000177
17500.0	538.6	-3.5	-65.5	79.7	694.0	640.6	60.5	16.2	1.000174
18000.0	528.4	-4.7	-71.4	81.3	684.0	639.1	64.0	17.9	1.000171
18500.0	518.3	-5.8	-78.7	79.8	673.7	637.7	64.3	19.3	1.000167
19000.0	508.3	-6.9	-10.0	78.3	663.6	636.4	63.3	20.5	1.000163
19500.0	498.5	-8.0	-11.3	76.9	653.6	635.0	61.5	20.3	1.000160
20000.0	488.8	-9.0	-12.4	76.4	643.5	633.7	59.6	20.0	1.000156
20500.0	479.3	-10.1	-13.5	75.8	633.6	632.4	57.8	20.1	1.000153
21000.0	470.0	-11.1	-14.6	75.3	623.8	631.1	56.1	20.3	1.000150
21500.0	460.8	-12.0	-16.1	71.2	613.7	630.0	55.2	20.2	1.000146
22000.0	451.7	-12.7	-17.9	65.0	603.4	629.1	54.2	20.0	1.000143
22500.0	442.7	-13.8	-19.0	64.8	594.0	627.7	52.4	18.7	1.000140
23000.0	433.9	-14.9	-20.1	64.6	584.7	626.4	50.0	17.2	1.000137
23500.0	425.2	-16.0	-21.1	64.4	575.5	625.0	48.0	15.2	1.000135

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 81 0745 HRS MDT
ASCENSION NO. 57

UPPER AIR DATA
1750030057
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 10 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL.HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION	
		AIR DEGREES	DEWPOINT CENTIGRADE			DIRECTION DEGREES(TN)	SPEED KNOTS		
24000.0	410.7	-17.1	-22.2	64.3	566.5	623.7	47.5	13.0	1.000132
24500.0	404.4	-18.2	-23.3	64.1	557.7	622.3	50.3	10.4	1.000130
25000.0	400.2	-18.7	-25.7	53.6	547.6	621.7	53.4	7.8	1.000126
25500.0	392.2	-19.1	-27.7	46.1	537.4	621.2	68.4	6.2	1.000123
26000.0	384.2	-19.5	-29.9	38.9	527.4	620.6	74.2	5.3	1.000120
26500.0	376.4	-20.0	-32.4	32.1	517.9	619.9	69.9	5.6	1.000118
27000.0	368.8	-21.3	-35.2	27.2	510.0	618.3	60.2	6.9	1.000115
27500.0	361.2	-22.6	-38.3	22.3	502.2	616.7	53.2	8.0	1.000113
28000.0	353.8	-24.0	-41.3	18.3	494.6	615.0	47.6	9.0	1.000111
28500.0	346.5	-25.3	-41.1	21.1	486.6	613.4	42.3	9.3	1.000109
29000.0	339.2	-26.6	-41.1	23.8	479.3	611.8	37.2	9.5	1.000108
29500.0	332.2	-27.9	-41.2	26.5	471.8	610.1	33.3	9.6	1.000106
30000.0	325.2	-29.3	-41.5	29.3	464.5	608.4	29.7	9.6	1.000104
30500.0	318.4	-30.6	-41.0	34.8	457.2	606.8	20.7	9.6	1.000103
31000.0	311.6	-31.9	-39.8	45.0	450.0	605.1	10.0	10.0	1.000101
31500.0	305.0	-33.3	-39.1	55.2	442.8	603.5	1.3	10.6	1.000100
32000.0	298.5	-34.5	-39.2	62.2	435.6	601.9	334.2	11.4	1.000098
32500.0	292.0	-35.4	-40.5	58.6	427.7	600.8	351.6	11.8	1.000096
33000.0	285.7	-36.2	-41.9	55.1	420.0	599.7	351.0	11.8	1.000095
33500.0	279.6	-37.1	-43.3	51.6	412.5	598.6	346.5	12.3	1.000093
34000.0	273.4	-38.4	-44.6	51.2	405.6	597.0	340.8	13.2	1.000091
34500.0	267.4	-39.7	-45.9	51.4	399.0	595.2	334.9	14.6	1.000090
35000.0	261.5	-41.1	-47.1	51.6	392.6	593.5	329.3	16.5	1.000088
35500.0	255.7	-42.5	-48.4	51.8	386.2	591.7	323.7	18.2	1.000087
36000.0	250.1	-43.9	-49.7	52.0	380.0	589.9	315.8	19.3	1.000085
36500.0	244.4	-45.0	-51.6	46.7**	373.1	588.5	308.9	20.6	1.000083
37000.0	238.8	-46.1	-53.7	41.3**	366.4	587.0	302.6	21.2	1.000082
37500.0	233.3	-47.2	-55.9	35.9**	359.8	585.6	296.8	22.0	1.000080
38000.0	228.0	-48.4	-58.2	30.5**	353.3	584.1	290.9	21.5	1.000079
38500.0	222.8	-49.5	-60.7	25.1**	347.0	582.6	284.9	21.0	1.000077
39000.0	217.7	-50.6	-63.5	19.7**	340.7	581.2	298.9	20.6	1.000076
39500.0	212.7	-51.7	-66.7	14.3**	334.6	579.7	310.6	20.4	1.000075
40000.0	207.8	-52.8	-70.9	9.0**	328.6	578.2	316.2	20.4	1.000073
40500.0	203.1	-54.0	-77.8	3.6**	322.8	576.8	321.1	20.4	1.000072
41000.0	198.4	-55.0			316.8	575.4	326.4	20.0	1.000071
41500.0	193.6	-56.0			310.6	574.1	333.9	18.2	1.000069
42000.0	189.0	-56.9			304.5	572.9	342.8	16.9	1.000068
42500.0	184.5	-57.8			298.6	571.6	351.7	17.0	1.000067
43000.0	180.1	-58.8			292.7	570.4	.3	17.6	1.000065
43500.0	175.9	-59.7			287.0	569.1	1.0	19.0	1.000064

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 61 0745 HRS MDT
ASCENSION NO. 57

UPPER AIR DATA
175003005/
JALLEN

GEODETIC COORDINATES
33.16712 LAT UEG
106.49511 LON UEG

TABLE 10 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
44000.0	171.7	-60.7		281.4	567.9	04	20.6	1.000063
44500.0	167.6	-61.6		276.0	566.6	6.0	20.7	1.000061
45000.0	163.5	-62.2		270.1	565.8	16.9	20.3	1.000060
45500.0	159.5	-62.9		264.3	564.9	30.0	20.2	1.000059
46000.0	155.6	-63.5		258.7	564.0	47.5	20.9	1.000058
46500.0	151.9	-64.2		253.1	563.2	62.4	23.3	1.000056
47000.0	148.1	-64.6		247.5	562.6	73.9	23.7	1.000055
47500.0	144.5	-64.8		241.7	562.3	84.6	25.0	1.000054
48000.0	141.0	-65.3		236.2	561.7	95.9	25.6	1.000053
48500.0	137.5	-66.1		231.3	560.5	107.2	26.7	1.000052
49000.0	134.1	-67.0		226.5	559.4	114.1	26.6	1.000050
49500.0	130.7	-67.8		221.8	558.3	117.9	24.5	1.000049
50000.0	127.5	-68.3		216.8	557.6	121.6	22.5	1.000048
50500.0	124.3	-68.7		211.8	557.0	117.7	18.8	1.000047
51000.0	121.2	-69.1		206.9	556.5	111.5	15.3	1.000046
51500.0	118.1	-69.5		202.1	555.9	102.0	13.1	1.000045
52000.0	115.2	-70.0		197.5	555.3	90.2	12.1	1.000044
52500.0	112.3	-70.4		192.9	554.7			1.000043
53000.0	109.5	-69.3		187.1	556.2			1.000042
53500.0	106.7	-68.8		181.9	556.9			1.000041
54000.0	104.1	-69.3		177.6	556.2			1.000040
54500.0	101.4	-69.9		173.9	555.4			1.000039

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 81
ASCENSION NO. 57

MANDATORY LEVELS

1750030057

JALLEN

TABLE 11

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
					DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4950.	23.4	9.0	40.	215.1	1.7
800.0	6684.	21.9	6.2	36.	223.9	5.1
750.0	8509.	19.2	2.8	34.	240.0	9.1
700.0	10441.	14.8	-1.1	36.	300.3	7.7
650.0	12479.	9.6	-1.5	46.	341.2	8.7
600.0	14639.	4.0	-3.9	57.	2.5	15.4
550.0	16937.	-2.1	-5.9	75.	50.1	14.9
500.0	19398.	-7.8	-11.1	77.	61.8	20.4
450.0	22062.	-12.9	-18.1	65.	54.1	19.9
400.0	24974.	-18.7	-25.9	53.	59.5	7.7
350.0	28212.	-24.6	-41.2	20.	45.0	9.2
300.0	31822.	-34.3	-38.8	63.	355.9	11.2
250.0	35932.	-43.9	-49.7	52.	315.9	19.3
200.0	40733.	-54.7			324.1	20.6
175.0	43502.	-59.9			.9	19.3
150.0	46624.	-64.5			67.7	23.3
125.0	50247.	-68.6			118.9	19.8
100.0	54615.	-70.2				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
24 JUNE 81
ASCENSION NO. 413

SIGNIFICANT LEVEL DATA

1750020413
WHITE SANDS
GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
880.1	3989.0	26.0	12.5	43.0
859.4	4675.8	24.0	12.0	47.0
850.4	4979.4	25.5	12.4	44.0
783.2	7343.4	21.7	8.6	43.0
700.0	10508.1	14.9	2.8	44.0
683.2	11182.7	13.6	1.9	45.0
587.0	15309.1	3.0	-3.3	63.0
500.0	19502.9	-7.8	-10.3	82.0
489.6	20040.4	-8.7	-10.8	85.0
474.2	20853.8	-10.2	-13.8	75.0
451.0	22119.1	-13.3	-16.5	77.0
428.6	23394.9	-13.8	-21.9	50.0
400.0	25110.9	-17.2	-27.5	40.0
343.6	28798.6	-25.9	-38.6	29.0
330.6	29716.2	-27.0	-37.5	36.0
300.0	31992.7	-33.3	-41.5	43.0
263.6	34940.1	-40.6	-49.1	39.0
250.0	36119.9	-44.0		
200.0	40939.2	-54.7		
172.0	44071.1	-61.4		
150.0	46847.8	-64.7		
135.0	48950.3	-68.4		
124.0	50630.7	-68.6		
120.0	51280.8	-67.3		
103.4	54242.5	-67.3		
100.0	54905.4	-68.7		
88.0	57417.6	-71.0		
79.4	59475.3	-61.4		
74.2	60868.6	-59.5		
70.0	62064.4	-62.4		
66.2	63196.5	-64.5		
50.0	68976.6	-56.1		
39.8	73779.5	-55.3		
30.0	79849.3	-47.6		
20.0	88825.5	-41.9		
14.6	95976.5	-35.9		
13.0	98631.5	-39.0		
10.4	103718.1	-37.7		

STATION ALTITUDE 3989.00 FEET MSL
24 JUNE 81
ASCENSION NO. 413

UPPER AIR DATA
1750020413
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.1	26.0	43.0	1018.5	675.9	125.0	5.1	1.000288
4000.0	879.8	26.0	43.1	1018.2	675.9			1.000288
4500.0	864.7	24.5	46.0	1005.7	674.2			1.000285
5000.0	849.8	25.5	44.0	985.0	675.4			1.000281
5500.0	835.1	24.7	43.8	970.9	674.4			1.000275
6000.0	820.7	23.9	43.6	956.9	673.4			1.000269
6500.0	806.5	23.1	43.4	943.1	672.4			1.000263
7000.0	792.6	22.3	43.1	929.6	671.4			1.000258
7500.0	778.9	21.4	43.0	916.4	670.4			1.000252
8000.0	765.2	20.3	43.2	903.8	669.1			1.000247
8500.0	751.7	19.2	43.4	891.3	667.8			1.000242
9000.0	738.5	18.1	43.5	879.1	666.5			1.000236
9500.0	725.5	17.1	43.7	867.0	665.2			1.000231
10000.0	712.7	16.0	43.8	855.1	663.9			1.000227
10500.0	700.2	14.9	44.0	843.4	662.6			1.000222
11000.0	687.7	14.0	44.7	831.2	661.4			1.000218
11500.0	675.3	12.8	46.4	819.6	660.0			1.000214
12000.0	663.0	11.5	48.6	808.3	658.5			1.000211
12500.0	650.9	10.2	50.7	797.3	657.0			1.000207
13000.0	639.0	8.9	52.9	786.4	655.5			1.000204
13500.0	627.4	7.6	55.1	775.6	654.0	59.0	11.4	1.000201
14000.0	616.0	6.4	57.3	765.1	652.4	68.6	12.2	1.000197
14500.0	604.7	5.1	59.5	754.7	650.9	74.8	12.7	1.000194
15000.0	593.7	3.8	61.7	744.5	649.3	79.0	12.9	1.000190
15500.0	582.7	2.5	63.9	734.2	647.8			1.000187
16000.0	571.7	1.2	66.1	723.7	646.2	77.2	13.7	1.000183
16500.0	560.9	-1.1	68.4	713.5	644.7	73.8	14.8	1.000180
17000.0	550.2	-1.4	70.7	703.4	643.1	74.5	16.0	1.000177
17500.0	539.8	-2.6	72.9	693.4	641.6	75.5	17.0	1.000173
18000.0	529.6	-3.9	75.2	683.6	640.0	81.0	16.5	1.000170
18500.0	519.6	-5.2	77.5	673.9	638.4	86.4	16.0	1.000167
19000.0	509.7	-6.5	79.7	664.4	636.9	90.3	14.7	1.000164
19500.0	500.1	-7.8	82.0	655.1	635.3	93.5	13.4	1.000161
20000.0	490.4	-8.6	84.8	644.5	634.3	93.6	11.6	1.000158
20500.0	480.8	-9.5	79.3	634.3	633.1	93.9	10.2	1.000154
21000.0	471.5	-10.6	75.2	624.4	631.8	94.3	9.1	1.000150
21500.0	462.2	-11.8	76.0	615.1	630.3	92.0	8.5	1.000147
22000.0	453.1	-13.0	76.8	605.9	628.8	80.1	8.8	1.000145
22500.0	444.2	-13.4	68.9	595.1	628.2	80.7	9.1	1.000141
23000.0	435.4	-13.6	58.4	583.9	627.9	76.1	9.4	1.000137

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET MSL
 24 JUNE 81 0915 HRS MDT
 ASCENSION NO. 413

UPPER AIR DATA
 1750020413
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT UEG
 106.37033 LON UEG

TABLE 13 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	420.8	-14.0	49.4	573.2	627.4	72.9	9.9	1.000133
24000.0	418.3	-15.0	46.5	564.0	626.2	74.1	10.6	1.000131
24500.0	410.0	-16.0	43.6	555.0	625.0	75.1	11.3	1.000128
25000.0	401.8	-17.0	40.6	546.1	623.7	76.2	12.0	1.000125
25500.0	393.6	-18.1	38.8	537.4	622.3	77.1	12.7	1.000123
26000.0	385.6	-19.3	37.3	528.9	620.9	78.9	12.4	1.000121
26500.0	377.7	-20.5	35.9	520.6	619.4	80.9	12.0	1.000118
27000.0	370.0	-21.7	34.4	512.4	617.9	81.2	11.8	1.000116
27500.0	362.5	-22.8	32.9	504.3	616.5	81.0	11.7	1.000114
28000.0	355.1	-24.0	31.4	496.4	615.0	74.4	11.4	1.000112
28500.0	347.9	-25.2	29.9	488.6	613.5	63.9	11.3	1.000110
29000.0	340.7	-26.1	30.5	480.4	612.4	54.2	11.0	1.000108
29500.0	333.6	-27.7	34.4	471.5	611.6	44.5	10.4	1.000106
30000.0	326.6	-27.8	36.9	463.6	610.3	37.0	10.1	1.000105
30500.0	319.7	-29.2	38.4	456.4	608.6	32.4	9.9	1.000103
31000.0	313.0	-30.6	39.9	449.3	606.9	29.3	9.9	1.000101
31500.0	306.4	-31.9	41.5	442.4	605.1	28.5	10.3	1.000100
32000.0	299.9	-33.3	43.0	435.5	603.4	28.9	10.8	1.000098
32500.0	293.4	-34.6	42.3	428.3	601.8	31.1	11.6	1.000096
33000.0	287.0	-35.8	41.6	421.2	600.2	33.1	12.5	1.000095
33500.0	280.8	-37.0	41.0	414.2	598.7	34.6	14.1	1.000093
34000.0	274.7	-38.3	40.3	407.4	597.1	35.5	15.6	1.000091
34500.0	268.7	-39.5	39.6	400.7	595.5	33.4	15.8	1.000090
35000.0	262.9	-40.8	37.0**	394.1	593.9	31.4	16.0	1.000088
35500.0	257.1	-42.2	20.5**	387.7	592.0	22.7	15.6	1.000087
36000.0	251.3	-43.7	4.0**	381.5	590.2	11.2	15.4	1.000085
36500.0	245.6	-44.8		374.8	588.6	.2	15.7	1.000083
37000.0	240.0	-46.0		368.0	587.2	349.9	16.1	1.000082
37500.0	234.5	-47.1		361.4	585.8	341.1	17.0	1.000080
38000.0	229.2	-48.2		354.8	584.3	339.6	17.2	1.000079
38500.0	223.9	-49.3		348.4	582.9	338.1	17.5	1.000078
39000.0	218.8	-50.4		342.2	581.4	340.0	18.2	1.000076
39500.0	213.8	-51.5		336.0	580.0	343.1	19.0	1.000075
40000.0	208.9	-52.6		330.0	578.5	346.4	19.6	1.000073
40500.0	204.1	-53.7		324.0	577.1	350.8	19.3	1.000072
41000.0	199.4	-54.8		318.2	575.6	355.3	19.2	1.000071
41500.0	194.7	-55.9		312.2	574.2	.7	18.6	1.000070
42000.0	190.0	-57.0		306.2	572.8	6.6	18.1	1.000068
42500.0	185.5	-58.0		300.4	571.4	11.0	18.0	1.000067
43000.0	181.1	-59.1		294.8	570.0	12.5	18.4	1.000066

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
1750020413
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
24 JUNE 81 0915 HRS MDT
ASCENSION NO. 413

GEODETIC COORDINATES
32.40043 LAT UEG
106.37033 LON DEG

TABLE 13 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	176.8	-60.2		289.2	568.5	13.9	18.8	1.000064
44000.0	172.6	-61.2		283.7	567.1	20.5	18.9	1.000063
44500.0	168.4	-61.9		277.7	566.2	27.8	19.3	1.000062
45000.0	164.3	-62.5		271.7	565.4	37.4	19.8	1.000061
45500.0	160.3	-63.1		265.9	564.6	54.2	20.7	1.000059
46000.0	156.4	-63.7		260.1	563.8	68.5	23.1	1.000058
46500.0	152.6	-64.3		254.5	563.0	79.4	25.1	1.000057
47000.0	148.9	-65.0		249.1	562.1	88.8	26.6	1.000055
47500.0	145.2	-65.8		244.0	560.9	96.9	28.8	1.000054
48000.0	141.6	-66.7		238.9	559.7	102.3	27.4	1.000053
48500.0	138.1	-67.6		234.0	558.5	108.0	25.1	1.000052
49000.0	134.7	-68.4		229.1	557.4	114.8	23.0	1.000051
49500.0	131.3	-68.5		223.5	557.4	113.0	19.7	1.000050
50000.0	128.0	-68.5		217.9	557.3	108.1	16.3	1.000049
50500.0	124.8	-68.6		212.6	557.2	100.6	13.1	1.000047
51000.0	121.7	-67.9		206.5	558.2	90.9	12.8	1.000046
51500.0	118.7	-67.3		200.9	558.9	81.5	13.2	1.000045
52000.0	115.7	-67.3		195.9	558.9	72.9	13.9	1.000044
52500.0	112.9	-67.3		191.0	558.9	74.3	13.6	1.000043
53000.0	110.1	-67.3		186.3	558.9	77.4	13.1	1.000041
53500.0	107.3	-67.3		181.6	558.9	80.4	12.6	1.000040
54000.0	104.7	-67.3		177.1	558.9	81.5	11.9	1.000039
54500.0	102.1	-67.8		173.2	558.2	82.8	11.3	1.000039
55000.0	99.5	-68.8		169.6	556.9	86.8	11.3	1.000038
55500.0	97.0	-69.2		165.8	556.3	93.6	12.5	1.000037
56000.0	94.6	-69.7		162.0	555.7	99.2	13.8	1.000036
56500.0	92.2	-70.2		158.2	555.1	100.7	14.7	1.000035
57000.0	89.9	-70.6		154.6	554.4	100.5	15.2	1.000034
57500.0	87.6	-70.6		150.7	554.4	100.2	15.8	1.000034
58000.0	85.5	-68.3		145.3	557.6	98.5	15.2	1.000032
58500.0	83.4	-66.0		140.2	560.8	96.2	14.5	1.000031
59000.0	81.3	-63.6		135.2	563.9	93.6	13.7	1.000030
59500.0	79.3	-61.4		130.4	566.9	93.1	13.7	1.000029
60000.0	77.4	-60.7		126.9	567.9	92.8	13.7	1.000028
60500.0	75.5	-60.0		123.5	568.8	92.4	13.8	1.000027
61000.0	73.7	-59.8		120.4	569.0	93.7	13.6	1.000027
61500.0	72.0	-61.0		118.2	567.4	95.1	13.4	1.000026
62000.0	70.2	-62.2		116.0	565.8	90.5	13.2	1.000026
62500.0	68.5	-63.2		113.7	564.5	93.9	12.6	1.000025
63000.0	66.8	-64.1		111.4	563.2	90.5	11.9	1.000025

STATION ALTITUDE 3989.00 FEET MSL
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UPPER AIR DATA
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GEODETIC COORDINATES
32.40043 LAT UEG
106.37033 LON UEG

TABLE 13 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
63500.0	65.2	-64.1		108.7	563.3	87.8	12.3	1.000024
64000.0	63.7	-63.3		105.7	564.3	88.1	15.9	1.000024
64500.0	62.1	-62.6		102.8	565.3	88.4	19.4	1.000023
65000.0	60.6	-61.9		100.0	566.3	92.2	22.6	1.000022
65500.0	59.2	-61.2		97.3	567.2	97.1	25.7	1.000022
66000.0	57.8	-60.4		94.6	568.2	100.9	28.9	1.000021
66500.0	56.4	-59.7		92.0	569.2	102.7	27.6	1.000020
67000.0	55.0	-59.0		89.5	570.1	104.6	26.4	1.000020
67500.0	53.7	-58.2		87.1	571.1	105.5	25.3	1.000019
68000.0	52.4	-57.5		84.7	572.1	104.6	24.1	1.000019
68500.0	51.2	-56.8		82.4	573.0	103.5	22.9	1.000018
69000.0	49.9	-56.1		80.2	574.0	101.1	22.2	1.000018
69500.0	48.8	-56.0		78.2	574.1	98.0	21.8	1.000017
70000.0	47.6	-55.9		76.4	574.2	94.9	21.4	1.000017
70500.0	46.5	-55.8		74.6	574.3	93.7	22.8	1.000017
71000.0	45.4	-55.8		72.8	574.4	92.6	24.2	1.000016
71500.0	44.4	-55.7		71.0	574.5	92.3	25.3	1.000016
72000.0	43.3	-55.6		69.4	574.6	93.2	26.0	1.000015
72500.0	42.3	-55.5		67.7	574.7	94.2	26.7	1.000015
73000.0	41.3	-55.4		66.1	574.8	94.7	27.4	1.000015
73500.0	40.3	-55.3		64.5	574.9	94.1	28.1	1.000014
74000.0	39.4	-55.0		62.9	575.4	93.5	28.8	1.000014
74500.0	38.5	-54.4		61.3	576.2	93.2	29.5	1.000014
75000.0	37.6	-53.8		59.7	577.0	94.5	29.6	1.000013
75500.0	36.7	-53.1		58.2	577.9	95.8	29.8	1.000013
76000.0	35.9	-52.5		56.7	578.7	97.0	30.0	1.000013
76500.0	35.1	-51.8		55.2	579.5	97.1	29.9	1.000012
77000.0	34.3	-51.2		53.8	580.4	97.3	29.8	1.000012
77500.0	33.5	-50.6		52.4	581.2	97.4	29.7	1.000012
78000.0	32.7	-49.9		51.0	582.0	94.4	30.6	1.000011
78500.0	31.9	-49.3		49.7	582.9	91.0	31.8	1.000011
79000.0	31.2	-48.7		48.4	583.7	87.9	33.1	1.000011
79500.0	30.5	-48.0		47.2	584.5	87.6	34.4	1.000011
80000.0	29.8	-47.5		46.0	585.2	88.0	35.8	1.000010
80500.0	29.1	-47.2		44.9	585.6	88.3	37.1	1.000010
81000.0	28.5	-46.9		43.8	586.0	89.6	38.3	1.000010
81500.0	27.8	-46.6		42.8	586.4	91.0	39.4	1.000010
82000.0	27.2	-46.2		41.8	586.9	92.4	40.6	1.000009
82500.0	26.6	-45.9		40.8	587.3	92.5	41.0	1.000009
83000.0	26.0	-45.6		39.8	587.7	92.3	41.3	1.000009

STATION ALTITUDE 3989.00 FEET MSL
24 JUNE 81
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UPPER AIR DATA
1750020413
WHITE SANDS
Table 13 (Con't)

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.4	-45.3		38.9	588.1	92.1	41.5	1.000009
84000.0	24.9	-45.0		38.0	588.5	91.4	41.6	1.000008
84500.0	24.3	-44.6		37.1	588.9	90.4	41.6	1.000008
85000.0	23.8	-44.3		36.2	589.3	89.5	41.7	1.000008
85500.0	23.2	-44.0		35.3	589.7	89.3	41.8	1.000008
86000.0	22.7	-43.7		34.5	590.1	89.4	41.9	1.000008
86500.0	22.2	-43.4		33.7	590.5	89.5	42.1	1.000007
87000.0	21.7	-43.1		32.9	590.9	90.3	42.3	1.000007
87500.0	21.2	-42.7		32.1	591.3	91.5	42.5	1.000007
88000.0	20.8	-42.4		31.3	591.8	92.7	42.8	1.000007
88500.0	20.3	-42.1		30.6	592.2	93.1	43.0	1.000007
89000.0	19.8	-41.8		29.9	592.6	93.1	43.1	1.000007
89500.0	19.4	-41.3		29.2	593.2	93.1	43.2	1.000006
90000.0	19.0	-40.9		28.5	593.7	93.0	43.3	1.000006
90500.0	18.6	-40.5		27.8	594.2	92.6	43.2	1.000006
91000.0	18.2	-40.1		27.2	594.8	92.3	43.2	1.000006
91500.0	17.8	-39.7		26.5	595.3	92.0	43.2	1.000006
92000.0	17.4	-39.2		25.9	595.8	92.3	43.6	1.000006
92500.0	17.0	-38.8		25.3	596.4	92.6	44.0	1.000006
93000.0	16.6	-38.4		24.7	596.9	92.9	44.4	1.000005
93500.0	16.3	-38.0		24.1	597.4	93.8	42.1	1.000005
94000.0	15.9	-37.6		23.6	598.0	95.0	39.0	1.000005
94500.0	15.6	-37.1		23.0	598.5	96.5	36.0	1.000005
95000.0	15.2	-36.7		22.5	599.0	99.0	33.3	1.000005
95500.0	14.9	-36.3		21.9	599.6	103.0	31.1	1.000005
96000.0	14.6	-35.9		21.4	600.0	107.5	29.0	1.000005
96500.0	14.3	-35.5		21.0	599.3	112.0	27.6	1.000005
97000.0	14.0	-35.1		20.6	598.6	113.3	28.6	1.000005
97500.0	13.7	-34.7		20.2	597.8	114.5	29.7	1.000005
98000.0	13.4	-34.3		19.8	597.1	115.7	30.7	1.000004
98500.0	13.1	-33.8		19.4	596.3	117.0	31.8	1.000004
99000.0	12.8	-33.9		19.0	596.3	118.3	32.8	1.000004
99500.0	12.5	-33.8		18.6	596.4	119.5	33.9	1.000004
100000.0	12.2	-33.7		18.2	596.6	119.3	33.8	1.000004
100500.0	12.0	-33.5		17.8	596.7	117.7	32.7	1.000004
101000.0	11.7	-33.4		17.4	596.9	115.9	31.7	1.000004
101500.0	11.5	-33.3		17.0	597.1			1.000004
102000.0	11.2	-33.1		16.6	597.2			1.000004
102500.0	11.0	-33.0		16.3	597.4			1.000004
103000.0	10.7	-32.9		15.9	597.6			1.000004

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UPPER AIR DATA
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GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 13 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	INDEX OF REFRACTION
103500.0	10.5	-37.8			15.5	597.7	1.000003

STATION ALTITUDE 3989.00 FEET MSL
24 JUNE 81 0915 HRS MDT
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MANDATORY LEVELS
1750020413
WHITE SANDS
TABLE 14

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4989.	25.5	12.3	44.	9999.0	9999.0XX
800.0	6731.	22.7	9.6	43.	9999.0	9999.0XX
750.0	8565.	19.1	6.3	43.	9999.0	9999.0XX
700.0	10498.	14.9	2.8	44.	9999.0	9999.0XX
650.0	12541.	10.1	.4	51.	9999.0	9999.0XX
600.0	14706.	4.5	-2.5	60.	72.3	12.6
550.0	17009.	-1.4	-6.0	71.	74.5	16.0
500.0	19475.	-7.8	-10.3	82.	93.5	13.4
450.0	22140.	-13.3	-16.7	76.	84.2	8.9
400.0	25068.	-17.2	-27.5	40.	76.4	12.1
350.0	28305.	-24.8	-37.2	30.	67.2	11.3
300.0	31928.	-33.3	-41.5	43.	28.8	10.8
250.0	36040.	-44.0			8.9	15.5
200.0	40839.	-54.7			354.6	19.2
175.0	43604.	-60.6			16.0	18.8
150.0	46720.	-64.7			85.6	26.0
125.0	50325.	-68.6			101.6	13.4
100.0	54734.	-68.7			84.9	11.0
80.0	59124.	-62.1			93.3	13.7
70.0	61849.	-62.4			96.6	13.2
60.0	64960.	-61.6			94.0	23.6
50.0	68715.	-56.1			101.4	22.3
40.0	73378.	-55.3			93.9	28.3
30.0	79505.	-47.6			87.8	35.2
25.0	83479.	-45.0			91.7	41.6
20.0	88405.	-41.9			93.1	43.0
15.0	94873.	-36.4			101.4	31.9

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

SIGNIFICANT LEVEL DATA
1750030050
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 81 0915 HRS MDT
ASCENSION NO. 58

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM.
MILLIBARS	MSL FEET	AIR DEGREES	DEWPOINT	
			CENTIGRADE	PERCENT
877.3	4051.0	27.9	12.3	38.0
867.0	4394.6	27.5	8.9	31.0
850.0	4968.6	25.9	8.4	33.0
820.0	6003.7	24.0	5.8	31.0
753.2	8427.7	20.5	.9	27.0
700.0	10485.0	15.1	-1.0	33.0
618.4	13883.3	7.0	-12.2	24.0
558.2	16615.1	-4	-5.6	68.0
541.0	17435.8	-2.7	-6.5	75.0
500.0	19479.1	-6.4	-12.3	63.0
489.6	20019.2	-7.3	-15.4	52.0
453.8	21949.1	-12.0	-18.8	57.0
400.0	25089.8	-18.2	-25.4	53.0
386.4	25938.0	-19.6	-29.4	41.0
318.4	30573.6	-30.0	-45.6	20.0
300.0	31958.9	-33.7	-43.0	38.0
284.2	33202.3	-36.1	-42.9	49.0
262.8	34977.7	-40.0	-49.0	37.0
250.0	36094.8	-42.5		
213.2	39571.7	-51.2		
200.0	40930.3	-54.6		
169.8	44331.8	-61.2		
150.0	46853.7	-63.8		
127.4	50114.1	-69.1		
116.0	51968.9	-67.6		
107.8	53425.3	-67.5		
100.0	54911.2	-69.4		
83.0	58593.6	-68.0		
77.0	60107.4	-61.0		
70.0	62062.8	-61.0		
50.0	69007.9	-58.6		
35.2	76423.8	-51.2		
30.0	79873.5	-49.5		
20.0	88760.7	-44.5		
16.1	93637.1	-38.2		
14.0	96827.1	-37.6		

STATION ALTITUDE 4051.00 FEET MSL
24 JUNE 81 0915 HRS MDT
ASCENSION NO. 58

UPPER AIR DATA
1750030050
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.0	877.5	27.9	12.3	38.0	1000.9	678.0	0.0	0.0	1.000285
4500.0	865.9	27.2	8.8	31.4	997.0	676.9	219.3	1.0	1.000270
5000.0	849.1	25.8	8.3	32.9	984.4	675.3	219.3	2.2	1.000266
5500.0	834.5	24.9	7.1	32.0	970.8	674.1	219.3	3.3	1.000259
6000.0	820.1	24.0	5.9	31.0	957.3	673.0	230.9	4.0	1.000253
6500.0	805.9	23.3	4.8	30.2	943.2	672.1	250.3	5.1	1.000247
7000.0	791.9	22.6	3.8	29.4	929.3	671.2	279.7	6.2	1.000242
7500.0	776.1	21.8	2.8	28.5	915.6	670.3	291.4	7.8	1.000237
8000.0	764.6	21.1	1.8	27.7	902.0	669.4	291.3	8.7	1.000231
8500.0	751.3	20.3	0.8	27.2	888.9	668.5	287.5	9.3	1.000227
9000.0	736.0	19.0	0.4	28.7	877.2	667.0	279.2	9.6	1.000223
9500.0	725.0	17.7	-0.0	30.1	865.6	665.4	276.3	8.7	1.000220
10000.0	712.2	16.4	-0.5	31.6	854.3	663.9	277.3	6.8	1.000217
10500.0	699.6	15.1	-1.1	33.0	843.1	662.4	291.2	5.6	1.000214
11000.0	687.0	13.9	-2.7	31.6	831.5	660.9	313.7	5.1	1.000208
11500.0	674.6	12.7	-4.3	30.3	820.1	659.5	339.4	6.4	1.000203
12000.0	662.4	11.5	-5.9	29.0	808.8	658.0	350.6	8.1	1.000199
12500.0	650.4	10.3	-7.5	27.7	797.6	656.6	14.4	9.7	1.000194
13000.0	638.6	9.1	-9.2	26.3	786.8	655.1	25.7	11.1	1.000190
13500.0	627.1	7.9	-10.9	25.0	776.0	653.7	33.7	12.0	1.000186
14000.0	615.7	6.7	-11.5	25.9	765.3	652.2	42.3	13.0	1.000183
14500.0	604.3	5.3	-9.3	33.9	754.5	650.7	50.6	14.1	1.000183
15000.0	593.0	4.0	-7.8	42.0	743.9	649.2	58.2	15.3	1.000183
15500.0	582.0	2.6	-6.7	50.0	733.5	647.7	64.4	16.6	1.000182
16000.0	571.2	1.3	-6.0	58.1	723.3	646.2	64.4	17.1	1.000181
16500.0	560.6	-0.1	-5.6	66.1	713.3	644.6	64.9	17.2	1.000179
17000.0	550.1	-1.5	-6.0	71.3	703.5	643.0	60.8	16.2	1.000177
17500.0	539.7	-2.8	-6.7	74.6	693.6	641.4	69.9	15.0	1.000174
18000.0	529.4	-3.7	-8.1	71.7	682.5	640.2	75.1	13.9	1.000169
18500.0	519.2	-4.6	-9.5	68.8	672.2	639.1	78.8	13.7	1.000165
19000.0	509.3	-5.5	-10.9	65.8	661.7	637.9	80.2	14.4	1.000161
19500.0	499.6	-6.4	-12.4	62.6	651.4	636.8	81.3	14.9	1.000158
20000.0	490.0	-7.3	-15.3	52.4	641.0	635.7	82.2	15.1	1.000153
20500.0	480.4	-8.5	-16.3	53.2	631.5	634.2	81.6	15.3	1.000150
21000.0	471.1	-9.7	-17.1	54.5	622.1	632.7	79.3	15.4	1.000147
21500.0	461.9	-10.9	-18.0	55.8	612.6	631.3	75.3	15.8	1.000145
22000.0	452.9	-12.1	-18.9	56.9	603.7	629.8	68.9	16.5	1.000142
22500.0	443.9	-13.1	-19.9	56.3	593.4	628.6	62.2	17.2	1.000139
23000.0	435.0	-14.1	-21.0	55.7	584.4	627.4	54.7	17.7	1.000137
23500.0	426.4	-15.1	-22.0	55.0	575.0	626.2	49.5	17.3	1.000134

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TABLE 16 (Con't)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.9	-10.0	54.4	565.8	624.9	45.6	15.9	1.000131
24500.0	409.6	-17.0	53.8	550.7	623.7	41.2	14.2	1.000129
25000.0	401.4	-18.0	53.1	547.8	622.5	34.7	11.9	1.000127
25500.0	393.4	-18.9	47.2	530.6	621.4	26.9	9.9	1.000124
26000.0	385.4	-19.7	40.7	529.5	620.3	21.8	8.3	1.000121
26500.0	377.4	-20.9	38.5	520.9	619.9	16.4	7.0	1.000119
27000.0	369.6	-22.0	36.2	512.5	617.5	21.0	5.9	1.000116
27500.0	362.0	-23.1	33.9	504.2	616.1	26.6	5.1	1.000114
28000.0	354.5	-24.2	31.7	496.0	614.7	42.3	6.7	1.000112
28500.0	347.2	-25.3	29.4	486.0	613.3	50.2	8.4	1.000110
29000.0	340.0	-26.5	27.1	480.1	611.9	54.4	9.9	1.000108
29500.0	333.0	-27.6	24.9	472.3	610.5	56.6	11.1	1.000106
30000.0	326.1	-28.7	22.6	464.7	609.1	54.9	10.8	1.000104
30500.0	319.4	-29.8	20.3	457.2	607.7	51.0	10.4	1.000103
31000.0	312.6	-31.1	25.5	449.9	606.1	35.2	10.0	1.000101
31500.0	306.0	-32.5	32.0	442.8	604.4	19.6	10.4	1.000099
32000.0	299.5	-33.8	38.4	435.7	602.8	4.0	12.3	1.000098
32500.0	293.0	-34.7	42.8	428.1	601.6	35.1	14.9	1.000096
33000.0	286.7	-35.7	47.2	420.6	600.4	349.1	15.7	1.000095
33500.0	280.5	-36.8	47.0	413.3	599.0	346.4	16.0	1.000093
34000.0	274.4	-37.9	43.6	406.2	597.6	340.3	15.6	1.000091
34500.0	268.4	-39.0	40.2	399.2	596.2	331.9	15.0	1.000089
35000.0	262.5	-40.0	36.3**	392.3	594.8	322.0	15.1	1.000088
35500.0	256.7	-41.2	19.7**	385.5	593.4	312.0	16.1	1.000086
36000.0	251.1	-42.3	3.1**	378.8	591.9	306.2	16.9	1.000084
36500.0	245.4	-43.5		372.3	590.4	305.2	17.2	1.000083
37000.0	239.8	-44.8		365.9	588.7	306.0	17.4	1.000081
37500.0	234.4	-46.0		359.5	587.1	309.5	17.4	1.000080
38000.0	229.1	-47.3		353.3	585.5	311.5	17.6	1.000079
38500.0	223.9	-48.5		347.3	583.9	311.6	17.6	1.000077
39000.0	218.9	-49.8		341.3	582.3	311.4	17.6	1.000076
39500.0	213.9	-51.0		335.5	580.8	310.6	17.0	1.000075
40000.0	208.9	-52.3		329.5	579.0	314.1	15.6	1.000073
40500.0	204.1	-53.5		323.7	577.3	321.8	13.8	1.000072
41000.0	199.3	-54.7		317.9	575.8	335.1	11.6	1.000071
41500.0	194.6	-55.7		311.8	574.5	350.4	9.6	1.000069
42000.0	190.0	-56.7		305.7	573.2	8.0	8.6	1.000068
42500.0	185.4	-57.6		299.8	571.9	26.9	8.3	1.000067
43000.0	181.0	-58.6		294.0	570.6	28.4	8.6	1.000065
43500.0	176.7	-59.6		288.3	569.3	28.2	8.8	1.000064

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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TABLE 16 (Con't)

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						DIRECTION DEGREES(TN)	SPEED KNOTS	
44000.0	172.5	-60.6		282.7	568.0	35.0	9.4	1.000003
44500.0	168.4	-61.4		277.0	566.9	42.2	10.2	1.000062
45000.0	164.3	-61.9		270.9	566.2	57.3	12.2	1.000060
45500.0	160.3	-62.4		265.0	565.6	70.1	15.4	1.000059
46000.0	156.4	-62.9		259.2	564.9	82.6	19.0	1.000058
46500.0	152.6	-63.4		253.5	564.2	94.2	23.2	1.000056
47000.0	148.9	-64.0		248.1	563.4	102.1	28.1	1.000055
47500.0	145.2	-64.9		242.9	562.3	108.9	29.3	1.000054
48000.0	141.6	-65.7		237.8	561.2	115.1	30.9	1.000053
48500.0	138.1	-66.5		232.8	560.1	118.0	28.8	1.000052
49000.0	134.7	-67.3		228.0	559.0	118.1	22.8	1.000051
49500.0	131.4	-68.1		223.2	557.9	116.5	17.0	1.000050
50000.0	128.1	-68.9		218.6	556.8	104.5	12.3	1.000049
50500.0	124.9	-68.8		213.0	556.9	80.3	8.6	1.000047
51000.0	121.8	-68.4		207.3	557.5	68.9	10.1	1.000046
51500.0	118.8	-68.0		201.7	558.0	61.2	12.0	1.000045
52000.0	115.8	-67.6		196.3	558.5	59.1	13.3	1.000044
52500.0	112.9	-67.6		191.4	558.6	58.9	14.5	1.000043
53000.0	110.1	-67.5		186.6	558.6	58.4	15.5	1.000042
53500.0	107.4	-67.6		182.0	558.5	57.7	16.4	1.000041
54000.0	104.7	-68.2		178.0	557.7	57.0	17.2	1.000040
54500.0	102.1	-68.9		174.1	556.8	54.6	17.8	1.000039
55000.0	99.6	-69.4		170.2	556.1	71.9	18.6	1.000038
55500.0	97.1	-69.2		165.8	556.4	79.8	18.2	1.000037
56000.0	94.6	-69.0		161.5	556.7	89.6	17.1	1.000036
56500.0	92.3	-68.8		157.3	556.9	98.6	16.5	1.000035
57000.0	90.0	-68.6		153.2	557.2	97.0	15.1	1.000034
57500.0	87.7	-68.4		149.3	557.4	95.0	13.7	1.000033
58000.0	85.5	-68.2		145.4	557.7	90.8	13.1	1.000032
58500.0	83.4	-68.0		141.6	557.9	85.5	12.9	1.000032
59000.0	81.3	-68.1		138.9	560.5	82.2	12.6	1.000030
59500.0	79.4	-68.3		132.1	563.7	82.2	12.1	1.000029
60000.0	77.4	-61.5		127.4	566.8	82.6	11.7	1.000028
60500.0	75.5	-61.0		124.0	567.4	87.6	12.7	1.000028
61000.0	73.7	-61.0		121.1	567.4	92.0	13.7	1.000027
61500.0	71.9	-61.0		116.1	567.4	92.2	14.8	1.000026
62000.0	70.2	-61.0		115.3	567.4	91.3	15.9	1.000026
62500.0	68.5	-60.8		112.5	567.6	91.0	17.2	1.000025
63000.0	66.9	-60.7		109.7	567.9	92.7	19.4	1.000024
63500.0	65.3	-60.5		107.0	568.1	94.1	21.6	1.000024

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GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
64000.0	65.7	-60.3		104.3	508.3	96.5	23.6	1.000023
64500.0	62.2	-60.2		101.7	508.6	100.4	25.3	1.000023
65000.0	60.7	-60.0		99.2	508.0	103.7	27.2	1.000022
65500.0	59.3	-59.8		96.8	509.0	106.0	27.4	1.000022
66000.0	57.8	-59.6		94.4	509.3	107.8	26.7	1.000021
66500.0	56.5	-59.5		92.0	509.5	109.7	26.1	1.000020
67000.0	55.1	-59.3		89.6	509.7	110.8	25.8	1.000020
67500.0	53.8	-59.1		87.6	509.9	111.8	25.4	1.000019
68000.0	52.5	-58.9		85.4	510.2	112.1	25.0	1.000019
68500.0	51.2	-58.8		83.3	510.4	107.9	24.1	1.000019
69000.0	50.0	-58.6		81.2	510.6	103.4	23.4	1.000018
69500.0	48.8	-58.1		79.1	511.3	98.6	22.5	1.000018
70000.0	47.7	-57.6		77.1	512.0	93.4	21.4	1.000017
70500.0	46.6	-57.1		75.1	512.6	87.6	20.4	1.000017
71000.0	45.5	-56.6		73.2	513.3	85.3	20.3	1.000016
71500.0	44.4	-56.1		71.3	513.9	85.3	20.5	1.000016
72000.0	43.4	-55.6		69.5	514.6	85.2	20.7	1.000015
72500.0	42.4	-55.1		67.7	515.3	86.3	21.9	1.000015
73000.0	41.4	-54.6		66.0	515.9	87.5	23.5	1.000015
73500.0	40.4	-54.1		64.3	516.6	88.6	25.0	1.000014
74000.0	39.5	-53.6		62.6	517.2	89.7	25.8	1.000014
74500.0	38.6	-53.1		61.0	517.9	90.7	26.4	1.000014
75000.0	37.7	-52.6		59.5	518.5	91.7	27.1	1.000013
75500.0	36.8	-52.1		58.0	519.2	91.5	27.8	1.000013
76000.0	35.9	-51.6		56.5	519.8	91.3	28.4	1.000013
76500.0	35.1	-51.2		55.0	520.4	91.1	29.1	1.000012
77000.0	34.3	-50.9		53.7	520.8	90.4	30.1	1.000012
77500.0	33.5	-50.7		52.4	521.1	89.7	31.1	1.000012
78000.0	32.7	-50.4		51.2	521.4	89.2	32.1	1.000011
78500.0	32.0	-50.2		50.0	521.7	89.0	33.2	1.000011
79000.0	31.2	-49.9		48.8	522.1	88.9	34.3	1.000011
79500.0	30.5	-49.7		47.6	522.4	88.7	35.4	1.000011
80000.0	29.8	-49.4		46.4	522.7	88.6	36.2	1.000010
80500.0	29.2	-49.1		45.3	523.1	88.6	37.1	1.000010
81000.0	28.5	-48.9		44.3	523.4	88.9	37.9	1.000010
81500.0	27.9	-48.6		43.2	523.8	88.9	38.5	1.000010
82000.0	27.2	-48.3		42.2	524.2	88.9	39.0	1.000009
82500.0	26.6	-48.0		41.2	524.5	89.0	39.6	1.000009
83000.0	26.0	-47.7		40.2	524.9	89.4	40.1	1.000009
83500.0	25.4	-47.5		39.2	525.3	90.1	40.7	1.000009

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TABLE 16 (Con't)

GEODETTIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
4000.0	24.9	-47.2			30.3	585.6	90.0	41.3	1.000009
4450.0	24.3	-46.9			37.4	580.0	91.1	41.8	1.000008
4500.0	23.7	-46.6			30.5	586.4	90.9	42.1	1.000008
4550.0	23.2	-46.3			35.0	586.7	90.8	42.4	1.000008
4600.0	22.7	-46.1			34.0	587.1	90.1	42.6	1.000008
4650.0	22.2	-45.8			34.0	587.4	88.1	42.6	1.000008
4700.0	21.7	-45.5			33.2	587.8	86.0	42.6	1.000007
4750.0	21.2	-45.2			32.4	588.2	84.1	42.6	1.000007
4800.0	20.7	-44.9			31.6	588.5	85.2	42.9	1.000007
4850.0	20.2	-44.6			30.9	588.9	86.2	43.2	1.000007
4900.0	19.8	-44.2			30.1	589.5	87.2	43.6	1.000007
4950.0	19.4	-43.5			29.4	590.3	89.1	44.4	1.000007
5000.0	18.9	-42.9			28.6	591.1	90.9	45.3	1.000006
5050.0	18.5	-42.3			27.9	592.0	92.7	46.3	1.000006
5100.0	18.1	-41.6			27.2	592.8	93.8	46.6	1.000006
5150.0	17.7	-41.0			26.6	593.6	94.8	46.7	1.000006
5200.0	17.3	-40.3			25.9	594.5	95.7	46.9	1.000006
5250.0	16.9	-39.7			25.3	595.3	96.5	45.6	1.000006
5300.0	16.6	-39.0			24.0	596.1	97.3	43.6	1.000005
5350.0	16.2	-38.4			24.0	596.9	98.1	41.6	1.000005
5400.0	15.8	-38.1			23.5	597.2	98.1	39.8	1.000005
5450.0	15.5	-38.0			23.0	597.4	97.4	37.9	1.000005
5500.0	15.2	-37.9			22.5	597.5	96.0	36.1	1.000005
5550.0	14.8	-37.8			22.0	597.6			1.000005
5600.0	14.5	-37.8			21.5	597.7			1.000005
5650.0	14.2	-37.7			21.0	597.8			1.000005

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JALLEN

GEODETIC COORDINATES
33.16712 LAT LEG
106.49511 LONG DEG

TABLE 17

PRESSURE EQUIPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4965.	25.9	8.4	33.	219.3	2.1	
800.0	6706.	23.0	4.4	30.	267.0	5.4	
750.0	8541.	20.2	.8	27.	286.7	9.3	
700.0	10475.	15.1	-1.0	33.	290.5	5.6	
650.0	12516.	10.3	-7.6	20.	15.1	9.8	
600.0	14680.	4.8	-8.6	37.	53.5	14.6	
550.0	16983.	-1.5	-6.0	71.	66.7	10.2	
500.0	19453.	-6.4	-12.3	63.	81.3	14.9	
450.0	22128.	-12.4	-19.2	57.	67.1	10.8	
400.0	25049.	-18.2	-25.4	53.	33.5	11.5	
350.0	28281.	-24.9	-37.3	30.	47.9	7.8	
300.0	31896.	-33.7	-43.0	38.	5.5	12.1	
250.0	36017.	-42.5			306.1	17.0	
200.0	40832.	-54.6			330.7	12.0	
175.0	43602.	-60.0			30.0	9.0	
150.0	46728.	-63.8			99.8	20.4	
125.0	50345.	-68.8			82.5	8.8	
100.0	54743.	-60.4			70.3	18.4	
80.0	59136.	-64.6			82.2	12.3	
70.0	61852.	-61.0			91.3	16.0	
60.0	65003.	-59.9			104.9	27.8	
50.0	68750.	-58.6			103.6	23.4	
40.0	73402.	-53.9			89.0	25.3	
30.0	79534.	-49.5			88.8	30.0	
25.0	83472.	-47.3			90.5	41.1	
20.0	88346.	-44.5			86.7	43.4	
15.0	94777.	-37.9			96.3	35.4	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

DATE
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